WHAT IS CLAIMED IS

1. A method of image enhancement employing partial-template matching, the method comprising the steps of:

storing at least a portion of an image;

selecting from the image a window comprising a plurality of adjacent line segments having pixels, the window including a target pixel;

comparing the pixels of the window with a template for a partial match; and

responsive to a partial match being found, substituting an enhancement pixel for the target pixel.

2. The method of claim 1, further including the step of performing the method on a plurality of target pixels.

3. The method of claim 1, wherein the comparing step further includes the step of comparing a pixel subset of the window as defined by a mask of a template with a prediction pattern as defined by the template.

4. A method of image enhancement employing partial-template matching, the method comprising the steps of:

storing consecutive lines of an image;

selecting from the image a window comprising a plurality of line segments of bits representing pixels, the window including a target pixel;

comparing a pixel-bit subset of the window as defined by a mask of a template with a prediction-bit subset as defined by a pattern of the template for a partial match; and

responsive to a partial match being found, substituting an enhancement pixel for the target pixel.

5. The method of claim 4, wherein the pixel subset includes the target pixel.

6. The method of claim 4, wherein the pixel subset further includes pixels from the same line as the target pixel as well as pixels from at least one line above and at least one line below the target pixel.

7. The method of claim 4, wherein the prediction-bit subset includes a designation of the pixel-bit subset for comparison.

8. The method of claim 4, wherein the template includes an enhancement pixel to be substituted for the target pixel when a partial match is found.

9. The method of claim 4, wherein the comparing step includes the further step of assigning weights to each matched bit, and each matched bit is multiplied by the corresponding weight prior to determining a partial match.

10. The method of claim 4, wherein the partial match is found if at least 90 percent of the bits of the pixel-bit subset compare with the prediction-bit subset.

11. The method of claim 4, wherein the partial match is found if at least 80 percent of the bits of the pixel-bit subset compare with the prediction-bit subset.

12. The method of claim 4, wherein the comparing step includes a further step of comparing a prediction-bit subset of a first template to a first pixel-bit subset of the window, and comparing a second prediction-bit subset of a second template to a second pixel-bit subset.

13. The method of claim 12, including a further step of, if a partial match is found with a plurality of prediction-bit subsets, applying a priority scheme to determine which of the partially matched prediction-bit subsets is used to substitute the enhanced pixel in response to the partial match.

14. The method of claim 12, wherein the substitution step further includes a step of selectively modifying the target pixel based on a comparison of the target pixel and the target pixel determined by the matched prediction-bit subset.

15. The method of claim 4, including:

a further step of selecting at least one template from a plurality of templates, at least two of the templates of the plurality of templates being responsive to different errors in the target pixel, and each template including an enhancement pixel;

wherein the comparing step further includes comparing a pixel-bit subset of the window as defined by a mask of a template with a prediction-bit subset as defined by a pattern of the selected template for a partial match; and

wherein the responsive step further includes in response to a partial match being found with the selected template, substituting the enhancement pixel of the partially matched template for the target pixel.

16. An image enhancement circuit, the circuit comprising:

a memory operable to store consecutive lines of an image;

a selector module operative to select from the image a window comprising a plurality of line segments of bits representing pixels, the window including a target pixel;

a plurality of templates, each template including a mask and a pattern;

a logic module operative to compare the pixels of the window with a template of the plurality of templates for a partial match; and

a pixel substitution module operative to substitute an enhancement pixel for the target pixel in responsive to a partial match being found.

17. The circuit of claim 16, where the logic module is at least partially implemented in hardware.

18. The circuit of claim 16, where the logic module is further operative to compare a pixel-bit subset of the window as defined by a mask of a template with a prediction-bit subset as defined by a pattern of the template.

19. The circuit of claim 18, wherein the pixel-bit subset includes all the pixel bits of the window.

20. The circuit of claim 18, wherein the partial match is found if at least 90% of the bits of the pixel-bit subset compare with the prediction-bit subset.

21. The circuit of claim 16, wherein the each template includes an enhancement pixel to be substituted for the target pixel when a partial match is found.

22. The circuit of claim 16, further including a rendering device operative to reproduce the image with the enhancement pixel.

23. The circuit of claim 22, wherein the rendering device is a selected one of a monitor, a projection unit, a laser printer, an ink-jet printer, a dot-matrix printer, a thermal printer, and a plotter.

24. A computer system, comprising:

a processor;

a memory accessible by the processor;

a rendering device;

a circuit operable to

store at least a portion of an image as pixels;

select from the image a window comprising a plurality of adjacent line segments having pixels, the window including a target pixel;

compare the pixels of the window with a template for a partial match;

responsive to a partial match being found, substitute an enhancement pixel for the target pixel; and

reproduce the image on the rendering device with the enhancement pixel.